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# IT Plan – Agency Submitted

301 ND DEPARTMENT OF HEALTH

Version: 2007-B-01-00301

Project: Infrastructure

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## Agency IT Overview

The ND Department of Health (NDDoH) continues to manage its information technology (IT) hardware and software through our information technology coordinators located throughout the department. Our coordinators are assigned to specific sections and divisions within the department and are responsible for coordinating the IT activities for that section. Because the department is located at three primary locations around the city of Bismarck, the NDDoH has designated one of these coordinators as the department lead IT coordinator. This lead position works closely with management and the other coordinators to effectively manage IT at a department level. The IT strategy of the department depends on the effective communication and coordination of the department's IT coordinators. The goals of this group are to continue to promote departmental system integration where it is affordable and sensible, standardize hardware and software configurations, develop and encourage information sharing across the department and with our external partners and customers, and to provide proactive IT service delivery.

The NDDoH relies heavily on the use of current technologies to provide it's valuable support and services to ensuring that North Dakota is a healthy place to live and that each person has an equal opportunity to enjoy good health. We advance our mission by networking, facilitating local efforts, collaborating with partners and stakeholders and providing expertise in developing creative public health solutions using these technologies.

The NDDoH continues to rely on the on the Information Technology Department (ITD) to provide essential telecommunications, data processing and network services to the department so that we may conduct are daily business functions. These services include, but are not limited to, telephone, voice mail, Internet access and LAN and WAN access across the state's high-speed network. These essential services benefit all the customers and employees of the department. Without the use of these essential services, the department would not be able to function and serve the people of North Dakota.

The NDDoH continues to rely on the effective use of personal computers (PCs) across the state's high-speed wide area network. The department currently maintains over 300 PCs, more than 100 laptops and about 40 high-output laser printers. The NDDoH maintains a wide variety of custom software applications and databases. These systems range in complexity from fully functional web-enabled applications, to intricate laboratory and analysis systems, to single function MS Access databases. The department continues to acquire federally developed software solutions that are typically mandated and provided at a nominal cost. Support and coordination for these software solutions are managed by the department's IT coordinators as they focus their efforts on department wide solutions. The primary software focus of the department is to continue to move new and existing solutions to the web when possible and integrate these solutions when it makes sense. The department's significant business applications are listed below:

1) Vital Statistics - This system allows the Division of Vital Records to capture and maintain vital event data, including birth, death, fetal death, abortion, marriage and divorce records. Electronic Vital Event Reporting (EVER) was released in January 2006 as a way for hospitals to electronically report birth event information via the web. Future upgrades will include electronic death and fetal death reporting from funeral homes. This system is a combination of Powerbuilder and J2EE compliant Internet applications and uses an Oracle database.

2) NDIIS - The North Dakota Immunization Information System is a statewide immunization registry that is used by all local public health units and more than 85% of the private providers in the state. The registry provides easy access and storage of immunization information for all residents of the state; however, it is primarily used for children. This system has been in use since 1997 and is used by our Division of Disease Control. This is a web-based application written in JAVA and Visual Basic and uses a MS SQL database.

3) AIRS - The ambient air quality system stores data collected by the data acquisition system located at various monitoring sites throughout the state. Data collected is then provided to the Environmental Protection Agency (EPA). This LAN-based application was originally purchased in 1980 and is used by the Division of Air Quality. Written in MS

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Access and Visual Basic, the data is stored in an MS Access database.

4) SDWIS - The Safe Drinking Water Information System provides a means to create and maintain safe drinking water information and the ability to transfer that data electronically to the EPA. The latest version of the systems was released in April 2006 and is used by our Division of Water Quality. Written in SQL, this system uses an Oracle database.

5) WICnet - WICnet is a web-based system used by our Division of Nutrition and Physical Activity for the North Dakota Women, Infants and Children (WIC) program and was implemented statewide on January 9<sup>th</sup>, 2006. WICnet is used to collect data on participants, including demographics, income, anthropometrics, nutrition education, careplan, referral data, and food packages. It also has the ability to schedule appointments, print checks on demand, plot growth charts, capture statewide messages, and produce various reports. The system runs either in connected (internet) mode or in a disconnected (no internet) mode. WICnet is a smart client application with web components developed in VB.NET and uses a MS SQL database.

6) NDCCR - The North Dakota Cancer Registry is used to collect all cancer related data from clinics, hospitals and laboratories in the state. The information collected is transmitted to the Centers for Disease Control and Prevention (CDC), so that it can be merged into the national database. Originally developed in 1996, the system is solely used by the Division of Cancer Prevention and Control. Written in MS Access and Visual Basic, the system uses an MS Access database.

7) StarLIMS - StarLims Sunrise Version 2 was deployed in production September of 2005 by the Division of Microbiology. This system serves as the Laboratory Information Management System (LIMS) for the Microbiology Laboratory. The main functions of StarLIMS include specimen management, test result and reporting, electronic laboratory reporting, accounts receivable billing and specimen/test records management. Future enhancements include inventory management, generating grant report statistics and mutual assistance functionality. StarLIMS uses a MS SQL database.

8) LIMS - The department's Laboratory Information Management System stores all the information associated with the analysis of samples submitted to the Division of Chemistry, along with the environmental samples submitted to the Division of Microbiology. Originally implemented in 1987, the system not only provides analysis services to the department, but also to several outside agencies including the EPA, Public Service Commission, Department of Agriculture, Public Water Plants and private citizens. Written in a proprietary language, this system uses a Pervasive database.

9) ASPEN - The Automated Survey Processing ENvironment is utilized by all facility surveyors with the Division of Health Facilities. All information collected regarding state and federal survey certification is stored in this system and sent to the Denver regional office and the Baltimore central office for the Centers for Medicare and Medicaid Services (CMS). Written in MS Access, this system uses an Oracle database.

10) HAN - The Health Alert Network is statewide, integrated information and communications system primarily used to distribute health alerts, advisories and updates relating to emergency/disaster events and prevention guidelines, through multiple means of communications. This system is used by the Emergency Preparedness Section and uses a MS SQL database.

11) DREAMS - The Disease Reporting Epidemiologic Assessment and Monitoring System is utilized by the Division of Disease Control and forms the foundation of public health surveillance in the state. The system allows the department to more efficiently monitor and more rapidly report disease information to the appropriate agencies. The system will also allow hospital laboratories to automatically submit lab test data directly into the system without the need for manual data entry. This system uses an Oracle database.

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The department continues to provide assistance and leadership to the state's Enterprise Architecture (EA) initiative, including representation on the State Information Technology Advisory Committee (SITAC). The NDDoH has representatives on many of the domain teams within EA, as the state progresses in its efforts at deploying enterprise wide solutions, effectively and efficiently across state government. The department recognizes the need for a cohesive statewide plan of action to develop the infrastructure for all state agencies and to include local public health units, hospitals, laboratories, tribal health, military health and the general public. The department is currently working with ITD and the Department of Human Services to determine the best Master Patient (Population) Index (MPI) option for state government. As these shared resources develop, the NDDoH will be able to extend additional services to its partners and customers.

## Agency IT Plan Contact Data

Contact: Darin J. Meschke

Title: Lead IT Coordinator

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## Agency Technology Goals And Objectives

GOAL: Maintain secure and reliable telecommunication services and computer networks

### Objective(s):

1) Secure both telecommunications and computer network services through the Information Technology Department (ITD). These services are essential to the effectiveness of the entire department. This is a continual ongoing goal of the NDDoH.

GOAL: Maintain and promote the use of office automation standards and practices within the NDDoH.

### Objective(s):

1) Hardware upgrades: Maintain a four-year replacement schedule for all department PC workstations and laptops to ensure that NDDoH staff continue to work efficiently and effectively.

2) Software upgrades: Maintain a routine schedule for the upgrade of PC workstation software, including office automation suites (MS Office) and operating systems.

GOAL: Enhance the current Electronic Vital Event Registration (EVER) System

### Objective(s):

1) Upgrade the EVER system to include a death and fetal death registration component. Electronic death registration will be required by the Intelligence Reform and Terrorism Prevention Act of 2004.

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## 1. If applicable, describe the reason for any extraordinary increase or decrease in your infrastructure costs.

IT infrastructure costs continue to rise due to the higher costs implemented by ITD. The department will see increases for basic network connectivity, including VPN connectivity, active directory licensing and web application hosting fees, including Oracle and SQL database fees. As the department continues to increase the use of technology to service the citizens of North Dakota, our IT infrastructure costs will follow.

2. Total number of desktop computers: 352  
Number of desktops for which you are requesting replacement funding: 143  
Average replacement cost/desktop: 1,300

3. Total number of laptop computers: 137  
Number of laptops for which you are requesting replacement funding: 60  
Average replacement cost/laptop: 2,373

What state planning region are these desktop/laptop computers located?

Region 1	1	2	3	3	1	4	2	5	7	6	3	7	469	8	3
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## 4. What percentage of these pcs are running the following operating systems:

(total should be equal to 100%)

Windows 98	1 %
Windows NT	2 %
Windows 2000	8 %
Windows XP	87 %
Other	2 %

5. What additional expenditures are being paid out of non-appropriated funds? 0

Please explain:

None.

## Agency Technology Activities

The Department of Health maintains a four-year replacement cycle for both PCs and laptops. System OS upgrades are typically not done until we obtain a new unit. MS Office upgrades are also typically done when we obtain a new unit. The Department of Health does not participate in software assurance as an entity. Some Microsoft products may be purchased with software assurance, but it is not a department mandate.

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		CURRENT APPROPRIATION	BUDGET REQUEST	OPTIONAL ADJUSTMENTS	REQUEST PLUS OPTIONALS	SUBSEQUENT BIENNIUM
IT5110	SALARIES - PERMANENT	\$0	\$619,800	\$0	\$619,800	\$0
IT5131	ADDITIONAL SALARIES - OTHER	\$611,072	\$0	\$0	\$0	\$644,592
IT5160	FRINGE BENEFITS	\$0	\$200,606	\$0	\$200,606	\$0
IT5161	ADDITIONAL FRINGE BENEFITS	\$197,638	\$0	\$0	\$0	\$208,630
IT5310	IT SOFTWARE AND SUPPLIES	\$559,435	\$383,983	\$3,800	\$387,783	\$403,184
IT5510	IT EQUIPMENT UNDER \$5000	\$293,265	\$362,000	\$8,000	\$370,000	\$380,100
IT6010	IT DATA PROCESSING	\$1,313,379	\$1,106,406	\$7,500	\$1,113,906	\$1,161,727
IT6020	IT COMMUNICATIONS	\$458,439	\$541,928	\$4,500	\$546,428	\$569,023
IT6030	IT CONTRACT SERVICES & REPAIRS	\$1,998,009	\$908,593	\$0	\$908,593	\$954,023
IT6930	IT EQUIPMENT OVER \$5000	\$7,200	\$26,500	\$0	\$26,500	\$27,825
<b>Total Budget:</b>		<b>\$5,438,437</b>	<b>\$4,149,816</b>	<b>\$23,800</b>	<b>\$4,173,616</b>	<b>\$4,349,104</b>
001	STATE GENERAL FUND	\$754,657	\$776,512	\$120,058	\$896,570	\$812,636
370	HEALTH & CONSOLIDATED LAB FUND 370	\$48,498	\$12,982	\$12,982	\$25,964	\$13,489
H100	ADMINISTRATIVE SERVICES FEDERAL FUN	\$644,205	\$367,796	\$49,710	\$417,506	\$385,632
H200	MEDICAL SERVICES FEDERAL FUNDS	\$1,123,825	\$399,072	\$0	\$399,072	\$417,974
H300	HEALTH RESOURCES FEDERAL FUNDS	\$447,196	\$507,946	-\$15,862	\$492,084	\$531,372
H400	COMMUNITY HEALTH FEDERAL FUNDS	\$1,108,647	\$346,801	-\$47,398	\$299,403	\$363,465
H500	ENVIRONMENTAL HEALTH FEDERAL FUNDS	\$980,843	\$926,350	-\$95,690	\$830,660	\$971,561
H600	EMERGENCY PREP & RESPONSE FED FD	\$289,868	\$756,601	\$0	\$756,601	\$794,431
H700	SPECIAL POPULATIONS FEDERAL FUNDS	\$40,698	\$55,756	\$0	\$55,756	\$58,544
<b>Total Funding:</b>		<b>\$5,438,437</b>	<b>\$4,149,816</b>	<b>\$23,800</b>	<b>\$4,173,616</b>	<b>\$4,349,104</b>

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Agency Priority - 1

Project Type: Major enhancement/upgrade

## Project description

The Electronic Death component of our Electronic Vital Event Registration (EVER) system will be a major enhancement to allow Funeral Directors, Physicians, Coroners and the State Medical Examiner to electronically register both death and fetal death information via the Internet. Currently, EVER allows hospitals throughout the state to electronically enter birth information, replacing the need for a paper birth certificate.

## Briefly describe the business need or problem driving the proposed project.

Upcoming federal regulations, as a result of the Intelligence Reform and Terrorism Prevention Act of 2004, are going to require electronic birth and death registration system in every state. The department implemented electronic birth registration in 2006 and has applied for federal funding, through the Social Security Administration, to allow us to build the death registration component.

## Describe how the project is consistent with the organizations mission.

Death registration is a required function within the Division of Vital Records according to NDCC 23-02.1

## Describe the anticipated benefits of the project and who will derive the benefits.

The benefits of this project allow the state of North Dakota to meet this anticipated federal requirement ahead of schedule. Currently, death registration is a slow, labor intensive paper-based system that does not meet the needs of the system participants and the people of North Dakota. Electronic registration is a much faster, more reliable way to record deaths in our state, allowing all participants, including federal partners like SSA to benefit from the quicker exchange of information.

## Describe the impact of not implementing the project.

Not complying with the federal regulations will make North Dakota birth and death certificates unacceptable by federal agencies like the Social Security Administration, U.S. Passport Office and the Department of Health and Human Services.

## Identify any risks associated with implementing this project and explain how the risks will be mitigated.

Risks included adequate ITD programming staff to complete the project, user acceptance by the death registration participants and adequate funding from the Social Security Administration.

## Describe the additional costs?

None.

Enter any additional costs for the project that are not included in IT Object Codes used in the Project Cost Screen?

Additional Costs? -

\$0

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Optional Project Costs -

\$0

**Total Project Cost? -**

**\$0**

**Tot Proj Costs + Optionals -**

**\$0**

**What additional expenditures are being paid out of non-appropriated funds?**

None.

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IT6010	IT DATA PROCESSING			\$0	\$120,000	\$0	\$120,000	\$0
	Total Budget:			\$0	\$120,000	\$0	\$120,000	\$0
H100	ADMINISTRATIVE	SERVICES	FEDERAL	\$0	\$120,000	\$0	\$120,000	\$0
	FUN							
	Total Funding:			\$0	\$120,000	\$0	\$120,000	\$0